A Case Of Cardiac Echinococcosis

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Anahtar Kelimeler: Kardiyak ekinokok, hidatik kist.

✓ A 37-year old man with chest pain and electrocardiographic inferior ischemic changes was admitted to the hospital. Cardiac echinococcosis was diagnosed and was operated under cardiopulmonary bypass. After enucleation of cyst, the thin myocardium over the cyst was removed and cavity was closed like a ventricular aneurysm. On histopathological examination of excised myocardium an echinococcal scolix was seen in between myofibril bands. The patient has been going during the past one year of follow-up.

Key words: Cardiac echinococcosis, hydatid cyst.

Echinococcosis is an endemic disease in Asia, Africa, South America and Mediterranean Countries. Hydatid cyst of the heart is an uncommon lesion, with the incidence ranging from 0.02% to 2% of all human hydatidosis[1,2,3,4,5].

CASE REPORT

A 37-years old man, was admitted with a two-month history of epigastric discomfort and chest pain that sometimes extended to left arm. There was electrocardiographic evidence of inferior ischemia. A chest roentgenogram revealed normal lungs and a cardiothoracic ratio within normal limits with a bulge on the left border of the heart (Fig. 1). The abnormal laboratory findings were as follows: Eosinophils of 12% and a positive Casoni’s skin test. Two-dimensional echocardiogram showed the presence of a cystic lesion in the wall of the left ventricle that moved with each contraction towards to the left ventricular cavity (Fig. 2). The left ventriculogram showed a thick myocardial mass with a filling defect in the anterolateral wall of the left ventricle. Coronary angiography showed slightly anterior displacement of the left anterior descending branch of the left coronary artery, with no obstruction present. The Computerize Tomography (CT-scan) showed a hypodence bulge of the cardiac apex measuring 3.4x3.8 cm with a mean CT-density of 10 HU (Fig. 3).

The patient was operated with the technique of cardiopulmonary bypass. The cyst was removed from the anteropical wall of the left ventricle. After washing the cavity with hypertonic saline solution, the thin and denaturated myocardium over the cyst was excised. The cavity was closed in the same manner as ventricular aneurysm. After an uncomplicated postoperative period, the patient was discharged on the
Figure-1: Bulge on the left border of the heart.

Figure-2: Two-dimensional echocardiography: An oval mass involving the ventricular wall.

Figure-3: CT-image of the heart showing hypodense apical bulge.
tenth day. An echinococcal scolex was seen in microscopic section of the excised myocardium (Fig. 4, 5, 6). Mebendazole 3000 mg/ per day was given to the patient for 10 months. The patient has no problem for 1 year postoperatively.

**DISCUSSION**

Once the eggs of echinococcus enter to the gastrointestinal tract, the liberated embryo penetrates the intestinal wall, passes into the lymphatics or mesenteric veins and is carried by the bloodstream to va-

**Figure-4:** A scolex is seen among the hypertrophic and denatured myocardial fibers (Magnification is a hundred times)

**Figure-5:** A scolex is seen in the myocardial fibers (Magnification is two hundred times)
rious parts of the body. If not destroyed by phagocytic cells, it loses its hooklets, undergoes central vesiculation, and becomes a cyst of about 10 mm in diameter in 5 months[6].

The symptoms of the hydatid cyst comparable to those of a slowly growing tumor, depend upon the location. Because of cardiac construction and density of the myocardium, particularly the ventricular wall, the growth of the hydatid cyst is sometimes restrained[1]. Parasite is carried to the myocardium via the coronary circulation. Left ventricular involvement is more than the other parts of the heart because left ventricular coronary artery supply is richer[7]. Cyst rarely localizes in the ventricular septum[8-11]. Mass of the cyst may compress to the coronary vessel with resultant myocardial ischemia. Coronary studies should be done in the symptomatic patient or when abnormalities of the electrocardiogram are present. Disturbances of the conduction mechanism of the heart, mechanical interference with the atroventricular valve and ventricular function and obstruction of the ventricular outflow tract were reported on the subject of cyst[8,9,12-15]. Rupture with anaphylactic shock may occur. Pulmonary embolisation is not rare[16], and is frequently fatal[10,13,16]. The diagnosis is made most commonly by chest roentgenogram, echocardiography, CT and angiocardiography[1,17]. Surgical excision of the echinococcal cyst is indicated in the asymptomatic patient, because its natural course is progressive and dangerous. Generally, after enucleation of cyst, denatured muscle over the cyst is resected. The remaining space is closed like a ventricular aneurysm with a teflon felt support. Recurrence of cardiac echinococcosis is rare[10,13]. Papo et al[13] reported a case of recurrence after apparently favorable treatment four years after operation. Postoperatively echinococcal scolices may be remained in myocardium and probably causes recurrence. Considering this situation, mebandazole,
flubendazole or albendazole should be given to every patient during the postoperative period for 10 to 12 months[1]. During the follow-up, echocardiographic controls are advisable to detect recurrence or other complications.

CONCLUSIONS
Cardiopulmonary bypass has become a simple, safe approach to the surgical excision of hydatid cysts of the heart. It is remarkable that echinococcal scolices may be retained in myocardium and probably causes recurrence after successful surgical intervention.

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REFERENCES